

## U.S. EPA Region 5's Comments on Second Notice of Draft Rule

### Article 2 Definitions

**327 IAC 2-1-1.1(95)** We recommend that the definition of “Pollution Prevention” be included, rather than just providing the cite that lists the definition. Or, consider stating: “Pollution prevention means “source reduction,” and other practices that reduce or eliminate the creation of pollutants through increased efficiency in the use of raw materials, energy, water, or other resources, or protection of natural resources by conservation. Source reduction means any practice which (I) reduces the amount of any hazardous substance, pollutant or contaminant entering any waste stream or otherwise released into the environment (including fugitive emissions) prior to recycling, treatment, or disposal; and (ii) reduces the hazards to public health and the environment associated with the release of such substances, pollutants or contaminants.”

The following definitions are provided in the GLI, but are not included in the Water Quality Standards: Existing Great Lakes Discharger, Load Allocation, Loading Capacity, Method Detection Level, Quantification Level, Total Maximum Daily Load, Wasteload Allocation, and Wet Weather Point Source. Also, the definition of “Great Lakes” in Indiana’s Rules includes Lake Erie.

### Antidegradation Standards and Implementation Procedures

**327 IAC 2-1-2(b)(2)** The rules include the phrase “... accommodates important *economic or social* development in the area in which the surface waters are located.” It should read “economic and social development...”

**327 IAC 2-1-2(b)(2)(A)** Where a decision is made to allow lower water quality in a high quality water, water quality necessary to protect existing uses must be maintained. Indiana’s rules require water quality to protect designated uses. This can be addressed by inserting “existing and” before “designated” in the first line.

**327 IAC 2-1-2(c)** The protection given to OHSRWs does not seem adequate. Given these waters have the potential for redesignation to ONRWs, it seems to be to be more appropriate to apply ONRW-level protection as an interim measure until reconsideration is complete. Applying ONRW-level protection would prevent any degradation of waters that are subsequently determined to be ONRWs. Similarly, it does not make sense to have a less stringent reserve assimilative capacity requirement for OHSRWs (see 2.2(e)). Also the tier 2.5/tier 2.9 distinction between OHSRWs and OSRWs seems misleading since the requirements are identical.

**327 IAC 2-1-2.2(b)** How are nonpoint source loads to a segment estimated? Are they assumed to be zero absent data to the contrary?

**327 IAC 2-1-2.3 Antidegradation Exemptions** The exemption concept is misused here. What are identified as “exemptions” from antidegradation are either activities that don’t lower water quality (and therefore don’t trigger antidegradation), or factors to be considered in either the significance or alternative technology components of the review. It would be more accurate and

preferable to address these issues as the basis for determining whether or not a significant lowering of water quality will exist that triggers antidegradation review.

**327 IAC 2-1-2.3(d)(1)** A general exemption from antidegradation for municipal plants meeting certain treatment specifications is inconsistent with Federal regulations. This fails to consider issues such as the social and economic benefits of constructing a treatment facility, alternative locations, etc. It would probably be more appropriate for Indiana to use treatment quality as a basis for making a significance determination or as a not needing any further consideration of treatment technology alternatives.

**327 IAC 2-1-2.3(d)(6)** This is unacceptably broad. While zebra mussel treatments may not result in a significant lowering of water quality subject to antidegradation review if they result in only short-term and temporary lowering of water quality (i.e., non-continuous treatment), this is a case-by-case determination and should not be made for all discharges a priori.

**327 IAC 2-1-2.3(d)(7-8)** This is not appropriate as an exemption. However, such discharges may not meet a significance test.

**327 IAC 2-1-2.3(d)(9)** This is not appropriate as an exemption. The lowering of water quality that will result should still be subject to review and public input. Antidegradation should not encourage cross-media transfers of pollutants. In any event, the facts the discharger is required to demonstrate to qualify for an exemption are not substantively different from those required under an antidegradation review.

**327 IAC 2-1-2.3(d)(11)** see (d)(1) above.

**327 IAC 2-1-2.3(d)(13)(A) Antidegradation Demonstration and Determination** This section should be clarified to reflect specifically which non-BCCs are eligible to be newly released or its discharge level increased in order to accomplish a reduction in the discharge of another pollutant or pollutant parameter.

## **Use Designations**

**327 IAC 2-1-3(a)(1) Surface Water Designations** states: “All surface waters... of the state are designated for, and shall be protected for, recreation... in and on the water, including full-body contact recreation.” We recommend that this section indicate that the level of protection applied to waters near POTW outfalls may be different than that applied elsewhere to reflect the diminished likelihood of extensive full-body contact recreation in the area immediately adjacent to the outfalls, *unless* the outfalls are located in areas that are suitable for full-body contact recreation.

## **Numeric Criteria**

**327 IAC 327 2-1-6.1(c)(1) Numeric Surface Water Quality Criteria** In Table 6.1-1, for Nickel, please indicate why a smaller intercept was used? Also, if new data is being used or if there is rethinking of the data, please advise Rob Pepin at U.S. EPA Region 5, who manages the Great Lakes Clearinghouse.

## Recreational Use Criteria

**327 IAC 2-1-6.3 Minimum Surface Water Quality Criteria for Recreational Use** This section specifies the minimum surface water quality criteria for E. coli bacteria for recreational use. We note that the meaning of Section 6.3(2) is quite unclear and suggest that it be clarified. Moreover, be advised that Indiana must include a maximum criterion for E. coli as specified at page 16 of U.S. EPA's Ambient Water Quality Criteria for Bacteria - 1986 (EPA440/5-84-002 January 1986).

## Methodologies

**327 IAC 2-1.1-4(b)** We recommend that the language state that the current ASTM method be used versus the year in case the ASTM gets revised. With regard to Section 4(e)(1), Region 5 has had questions raised about methodologies used to calculate EC50s. Indiana may want to consider stating specifically in the rules how EC50s are calculated.

**327 IAC 2-1.1-4(j)(6)** Equation (A) is incomplete.  $FAV = e^A$ , not “e” as in Indiana's proposed rules. Please verify that it is  $e^A$ .

**327 IAC 2-1.1-4(j)(6)(D)** Exponents in the equation are missing.

**327 IAC 2-1.2-1(e)(1), (e)(2)** superscripts and subscripts in these equations are garbled.

**327 IAC 2-1.2 Human Health Methodology** There is a typographical error in RAD equation ( $q1^*$ , was omitted).

**327 IAC 2-1.2-2(c)** RAD equation, “\*” term missing from  $q1^*$ .

## Site Specific Modifications

### **327 IAC 2-1.3-1 Site Specific Modifications to Tier 1 and Tier II Water Quality Criteria**

The recalculation procedure used to protect endangered and threatened species is not defined. We recommend IDEM require notification of other Great Lakes States of any approved site-specific criteria as is required in Guidance. Additionally, the proposed rules do not mention EPA review and approval; all site-specific criteria are subject to review and approval by EPA.

**327 IAC 2-1.3-1(a)(3)(B)(ii)** We noticed that the term “Gobas” is omitted from the phrase “input parameters of the Gobas model” which is the term used in the GLI.

**327 IAC 2-1.3-1(i)** Table 1.3-1 on site-specific modifications to Tier 1 water quality criteria, the CMC criteria for the parameters listed for the west fork of the White River are different than the recalculated site-specific water quality criteria submitted to us on December 4, 1997. Although the criteria for many of the parameters are more stringent than what was proposed and submitted to us initially, it remains necessary to submit and request approval of such modifications prior to their use in a permit or TMDL.

## Special Designations

**327 IAC 2-1.4-1 Designation of a Water body as an OSRW or ONRW** The stringent criteria proposed for OSRW and ONRW classification may preclude appropriate protection for important resources as contemplated by Federal regulations. For example, a water body that provides important recreational opportunities in an urban area would not appear to qualify for special protection.

**327 IAC 2-1.4-1(c)(2)** Provides definition of “excellent chemical quality” which requires a comprehensive assessment of the watershed. If such an assessment is unavailable, is a water precluded from consideration for ONRW or OSRW classification?

## Variances & Mercury Variance

**327 IAC 2-1.6-1 Variance from a Water Quality Criterion** Indiana’s rules allow new/recommencing discharges to participate in a mercury variance. This is not consistent with either the Great Lakes Guidance or Federal regulations and policy on variances. (Ohio’s multiple discharge variance for mercury does not contemplate application to new discharges). Under Indiana Statutes, the basis for granting a variance is undue burden or hardship on the permittee requesting the variance. Variances are subject to review and approval by EPA. EPA will only approve of variances on economic grounds where it is demonstrated that not granting the variance will result in substantial and widespread social and economic impact.

In addition, the term “variance” is defined at 327 IAC 2-1-1.1(129) as “a deviation from a water quality criterion or a narrative water quality standard granted by the commissioner pursuant to 327 IAC 2-1.6.” As you are aware, a variance is a short-term modification from meeting applicable water quality standards. Variances are temporary exemptions; a short-term criteria change. That variances are *temporary* changes in water quality standards should be stated in the definition or in 327 IAC 2-1.6 of the rules. Also, variances are subject to review every three years.

## Considerations in the Calculation and Specification of Effluent Limitations

**327 IAC 5-2-11(a)(5)(B)** The definition provided for E. coli states that the average monthly discharge and average weekly discharge, as a concentration, shall be calculated using a geometric mean. The calculation used to determine the daily maximum discharge limitation should be included in this section as well.

## Determination of Reasonable Potential to Exceed Water Quality Standards for Certain Toxic Substances

**327 IAC 5-2.1-1** Indiana’s rules permit the commissioner to waive the requirement for a biological assessment that is normally required to waive the requirement to develop a Tier II value based on consideration of the characteristics of the pollutant, the concentration of the pollutant in the effluent, the effluent flow and the biological and physical characteristics of the

receiving water body. This does not appear to be consistent with the Guidance. Indiana should consider clarifying its intent with respect to this provision.

**327 IAC 5-2.1-2(c)(4)** So that the alternate procedure is consistent with the default procedure, we recommend revising PEQ shall be established at the upper 95 percent confidence interval of the 95th percentile of the distribution of the relevant effluent data.

**327 IAC 5-2.1-2(e)** Indiana's rules include identical requirements to the Guidance except for condition three. The Guidance states: "Water quality characteristics (e.g., temperature, pH, hardness) are similar in the intake and receiving water." Indiana's rules state: "any difference in a water quality characteristic related to the pollutant being discharged (such as temperature, pH, and hardness) between the intake and receiving waters does not result in an adverse impact on the receiving water." The focus of the Guidance provision is to use water quality characteristics to verify that the intake and receiving waters are the same body of water, whereas Indiana's rules are intended to accommodate differences as long as they do not cause adverse impacts. This does not appear to be consistent with the Guidance.

#### **Determination of Reasonable Potential to Exceed Water Quality Criteria for Whole Effluent Toxicity**

**327 IAC 5-2.1-3** Note that subsection (a) refers to subsection (c). We were unable to locate subsection (c).

The USEPA, Region 5, is concerned that the procedure described in subsection (b) may result in the IDEM concluding that certain discharges will not cause, have a reasonable potential to cause, or contribute the excursions above the water quality criteria for acute and chronic whole effluent toxicity when an alternate procedure that focuses on the upper tail of the distribution of effluent quality data, such as that presented in proposed 327 IAC 5-2.1-2(c), would result in a conclusion to the contrary. We believe any single acute or chronic whole effluent toxicity test result that exceeds the wasteload allocation shows that the discharge will cause excursions above the relevant criterion and, as a result, water quality-based effluent limitations must be established, unless there are sufficient data to conclude that the observed exceedence will occur so infrequently that water quality criteria will not be violated. We recommend revising the proposed procedures such that the IDEM would reach the same conclusion when presented with one or more test results that exceed the wasteload allocation.

With regard to assessing whether a discharge demonstrates a reasonable potential to exceed water quality criteria, we believe the proposed procedures for both acute and chronic toxicity are unsatisfactory. The decision criterion of 0.2 in the equation,  $(TU_x)(F) \leq 0.2$ , does not appear to have a clear theoretical or empirical basis in the water quality criteria for acute and chronic toxicity. We are concerned that this decision criterion exceeds by several orders of magnitude the values that correspond to the duration and acceptable frequency of exceedence of water quality criteria for acute and chronic toxicity. We recommend revising proposed 327 IAC 5-2.1-3(b) so it establishes a procedure the same as or substantially similar to the procedure for certain toxic substances provided at proposed 327 IAC 5-2.1-2(c).

## **Special Provisions for Noncontact Cooling Water Discharges**

**327 IAC 5-2.1-4** For noncontact cooling water, proposed 327 IAC 5-2.1-4 would provide an exemption from the general requirements at 327 IAC 5-2.1-1 and 2. The exceptions to the exemption notwithstanding, proposed 327 IAC 5-2.1-4 is inconsistent with 40 CFR 122.44(d). Regardless of the type of water discharged, including noncontact cooling water, or the presence or absence of impairment in the receiving waters, 40 CFR 122.44(d) requires NPDES permits to include water quality-based effluent limitations for pollutants whenever the permitting authority determines that the discharge will cause, have a reasonable potential to cause, or contribute to excursions above water quality criteria. Due to this inconsistency with Federal regulation, the USEPA, Region 5, strongly recommends deleting this section.

## **Special Provision for Treatment Additives**

**327 IAC 5-2.1-5** We believe a water treatment additive, the discharge of which is neither authorized in nor controlled by an effective NPDES permit, provides cause for modification of a permit under 40 CFR 122.62. We are concerned that, absent a permit modification to authorize and control the discharge of an additive, the authorizations contemplated in paragraphs (f)(2) and (3) of 327 IAC 5-2.1-5 are inconsistent with Federal regulation. We recommend deleting these paragraphs from the proposed rule. In the alternative, we are available to explore with you possible modifications to 327 IAC 5-2.1-5 that, when supplemented with additional administrative action (e.g., conditions established in an individual permit at the time of issuance or reissuance, a general NPDES permit, or a general NPDES permit rule), may obviate the need for modification of individual permits.

## **Wasteload Allocations**

**327 IAC 5-2.2-1(d)** Human health drinking water criteria are applied at the point of water intake. The WLA procedures specify use of the harmonic mean at the point of intake rather than the point of discharge. For BCCs, this may result in unacceptably high effluent limits if aggregate flow is greater at the point of intake unless the nondrinking water supply criteria are also applied and the more stringent used as the basis for the limit. Is this the case?

### **327 IAC 5-2.2-1(e)(7)(F)(ii)(AA) Imposition of Water Quality-Based Effluent Limitations**

This section states that “... it is recommended that the discharger perform a similar evaluation for pollution prevention measures.” Pursuant to the Great Lakes Initiative guidance which requires consideration of pollution prevention, this section should state that “the discharger *shall* perform a similar evaluation for pollution prevention measures.”

**327 IAC 5-2.2-1(f)(1)(D)** This passage indicates that the background concentration of whole effluent toxicity shall be assumed equal to zero unless data are available indicating that the discharge of the WET and any background WET are additive. To minimize the number of instances in which background will be assumed equal to zero, we recommend that the IDEM, in prescribing permit application and permit conditions under which dischargers would be required to conduct toxicity tests on whole effluents, require dischargers to use background water as the dilution water in the test. Conducting tests in this fashion will show the additive or mitigative

effect of the background waters on the effluent. In order to conduct tests this way, the analyst would be required to establish a background water control and a laboratory water control.

**327 IAC 5-2.2-1(g)(2)** This section states that “water quality-based effluent limitations to achieve the E. coli criteria contained in 327 IAC 2-1-6.3 shall be established in accordance with 327 IAC 5-2.3-1(d).” However, 327 IAC 5-2.3-1(d) states that for E. coli, a weekly average WQBEL of 125 per 100 milliliters shall be established to ensure compliance with the water quality criteria for E. coli. The daily and the monthly E. coli criteria should be included in this section.

**327 IAC 5-2.2-1(g)(4)(D)(I)** We recommend adding the following language to paragraph (AA): “... shall meet the requirements of 327 IAC 2-1-6.1(e). From the equation, the commissioner shall establish a wasteload allocation which shall be transformed into water quality-based effluent limitations.”

The USEPA, Region 5, reads paragraph (BB) to allow compliance with permit conditions to be determined based on measurements of ambient water quality. We strongly recommend deleting this paragraph since 40 CFR 122.44(d) requires water quality-based effluent limitations to be established for *discharges* into waters of the United States, 40 CFR 122.2 defines effluent limitation to mean any restriction ... on quantities, discharge rates, and concentrations of pollutants which are *discharged* into waters of the United States..., and 40 CFR 122.45 requires all effluent limitations, standards, and prohibitions to be established for each outfall or discharge point. In addition to being at odds with these regulations, permit conditions drafted consistent with the proposed language may be difficult to enforce.

### **Alternate Mixing Zone Demonstration**

**327 IAC 5-2.2-2** Citations throughout this section seem to be garbled.

The cross references to the other portions of Indiana’s rules relating to mixing appear to be garbled, so it is difficult to understand Indiana’s intent. As written, the requirements to preserve a zone of passage, not impinge on a water intake, protect threatened or endangered species and not impact unique or critical habitat of indigenous species appear to apply only to [chronic] mixing zones. Indiana’s rules do not specifically address zones of passage, but Indiana’s rule at 2.2-1(a)(1)(D) does require that applicant for a mixing zoned document the physical chemical and biological characteristics of the receiving water. Please clarify how Indiana’s provisions correspond to the Great Lakes Guidance.

### **TMDLs**

**327 IAC 5-2.2-5(a)** The USEPA will be proposing new regulations this year. You should be aware that 130.7 may change, and regulations may need to be revised again.

**327 IAC 5-2.2-5(e)** Make sure that if the Margin of Safety (MOS) for a TMDL is defined as an unallocated portion of the loading capacity set aside to account for uncertainty, that is not the same as reserve capacity, which is defined as the portion of the capacity set aside for future

growth.

### **Determination of water quality-based effluent limitations**

**327 IAC 5-2.3-1** provides that

[t]he numeric water quality criteria set forth in 327 IAC 2-1-6.1 and Tier I and Tier II criteria established under 327 IAC 2-1.1 and 327 IAC 2-1.2 shall not be enforceable against any point source discharger until translated into effluent limitations that are incorporated in NPDES permits in accordance with this article.

In some situations, IDEM satisfies the water quality based permitting requirements of Section 301(b)(1)(C) of the Clean Water Act and 40 CFR 122.44(d) by including narrative, rather than numeric, effluent limitation in situations where there is reasonable potential. For example, notwithstanding the fact that untreated combined sewer overflows generally have the reasonable potential to cause or contribute to nonattainment of water quality standards, IDEM generally does not include numeric WQBELs in permits for combined sewer overflows. Instead, IDEM includes narrative effluent limitations applicable to the CSOs that prevent discharges that cause or contribute to nonattainment of water quality standards. USEPA. (See attached letter from USEPA to IDEM.) IDEM should clarify that nothing in 327 IAC 5-2-3.1 prevents using numeric criteria as a basis for establishing in an enforcement action that a discharge has caused or contributed to nonattainment of a water quality standard, and therefore that the discharge violated a narrative effluent limitation prohibiting such discharges.

2.3-1(g) states:

Whenever a WQBEL is developed, unless otherwise provided IN subdivision (3) through (5), the WQBEL in the NPDES permit shall be expressed as both a concentration value and a corresponding mass loading rate as follows:"

2.3-1(g) is identical to the Guidance except that subdivision (4) allows for the use of tiered mass limits for discharges that increase as a result of wet weather flows. Given that (4) provides no mention of concentration limits and (4) is one of the exceptions to the general requirement that all limits be expressed as both mass and concentration, it appears as if (4) only requires mass limits where tiered limits are employed. This appears to conflict with the Guidance. This issue was raised previously with Indiana as needing clarification

### **327 IAC 5-2.3-1(d) Water Quality-Based Effluent Limitations Less Than the LOQ**

**Authority** Only weekly averages for E. coli are listed in this section. Please see comment at 327 IAC 5-2.2-1(g)(2) above.

### **WQBELs Less Than the LOQ**

**327 IAC 5-2.3-2(h)** Indiana's procedures do not require quarterly monitoring. Indiana's rules also do not require annual review, semi-annual monitoring of potential sources or annual status report. These do not appear to be consistent with the Guidance. Also, the cite to 327 IAC 5-2.1-



2(d)(5) doesn't appear to be accurate.

### **Disinfection Requirements**

**327 IAC 5-10-6(d)** Please clarify why the language at section (d) was removed.

### **Stormwater General Permits**

**327 IAC 15-5-4 General Conditions** We recommend deleting the word “yarding” from the definition of agricultural land use or modifying the definition to clarify that agricultural land use does not include land used for concentrated animal feeding operations as that term is defined at 327 IAC 5-4-3.

In a February 1998 policy memorandum (enclosed), the USEPA clarified that storm water discharges from the construction of an animal feeding operation, where five or more acres of land are disturbed, are subject to the NPDES program. As a result, we recommend revising the definition of “land disturbing activity” to clarify that such discharges are subject to 327 IAC 15-5.

**327 IAC 15-5-7(b)(6)(B) General Conditions for Construction Activity Erosion Control Measures** This section states that “Run-off from a disturbed area shall be controlled by one or more of the following measures: except as prevented by inclement weather conditions or other circumstances beyond the control of the operator, appropriate vegetative practices will be initiated within seven days of the last land disturbing activity at the site regulated by this rule. Appropriate vegetative practices include, but are not limited to, seeding, sodding, mulching, covering, or by other equivalent erosion control measures.” We recommend that appropriate vegetative practices include the seeding or planting of native flora as an erosion control measure, as native plants work efficiently as filters for polluted runoff, and the long root systems of native plants helps decrease storm water runoff.